ER/WM&I DDT

0001111004

Source/Driver. (Name & Number from ISP, IAG milestone, Mgmt Action, Corres Control, etc)	Closure # (Outgoing Corres Control #, if applicable)	N/A Due Date
W R Sproles Originator Name	G D DiGregorio QA Approval	A M Tyson Contractor Manager(s)
A K Sieben Kaiser-Hill Program Manager(s)	T G Hedahl Kaiser-Hill Director	

Document Subject.

COMPARISON OF ANALYTICAL RESULTS FOR THE PCB REMOVAL PROJECT - AMT-067-97

KH-00003NS1A June 19, 1997

Discussion and/or Comments

Please find attached a response to the Environmental Protection Agency's request for a comparison of EPA SW-846 Method 8080 and Method 4020 analytical results for the PCB Removal Project as agreed to in the Department of Energy, Rocky Flats Field Office letter dated August 1, 1995 (DOE 14033) The original RMRS correspondence (AMP-077-95), dated September 6, 1995, was apparently never forwarded to EPA Although the Department of Energy only agreed to a comparison of analytical data from the first PCB site, comparison data for the entire project has been included in the attached correspondence since the project scope has been completed

Enclosure
As Stated

WRS/aw

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22 150F

ADMIN RECORD

KAISER-HILL
Company

97-RF-00000

June 19, 1997

Steve Slaten
Regulatory Liaison Group
DOE, RFFO

COMPARISON OF ANALYTICAL RESULTS FOR THE PCB REMOVAL PROJECT– TGH-XXX-97

Please find attached a response to the Environmental Protection Agency's request for a comparison of EPA SW-846 Method 8080 and Method 4020 analytical results for the PCB Removal Project as agreed to in the Department of Energy, Rocky Flats Field Office letter dated August 1, 1995 (DOE 14033) The original RMRS correspondence (AMP-077-95), dated September 6, 1995, was apparently never forwarded to EPA Although the Department of Energy only agreed to a comparison of analytical data from the first PCB site, comparison data for the entire project has been included in the attached correspondence since the project scope has been completed

If you have any questions regarding this transmittal, please contact Ann Sieben of my staff at 966-9886

T G Hedahl
ER/WM&I Operations
Kaiser Hill Company

Enclosures
As Stated

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97-RF-00000

June 19, 1997

Tim Rehder
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COMPARISON OF ANALYTICAL RESULTS FOR THE PCB REMOVAL PROJECT

This letter addresses the two conditions associated with the use of EPA SW-846 Draft Method 4020 for cleanup verification of polychlorinated biphenyls as described in the Environmental Protection Agency (EPA) letter sent on July 6, 1995 (8HWM-FP) The two conditions described involve comparison studies between EPA SW-846 Method 8080 and EPA SW-846 Draft Method 4020 to determine the acceptability of Method 4020

At a meeting held with the Environmental Protection Agency, Colorado Department of Public Health and Environment, Department of Energy, and Kaiser-Hill on August 4, 1995, the exclusive use of Draft Method 4020 (Immunoassay Field Technique) analytical data for verifying attainment of the 25 ppm cleanup level (i e the discontinuation of any analysis using Method 8080) was discussed However, since approval was not obtained, all of the soil confirmation samples for the PCB Removal Project were analyzed using the Draft Method 4020 and 20% of the samples were split and shipped to an offsite laboratory for analysis using Method 8080 as stated in the Final Sampling and Analysis Plan for the Removal of Polychlorinated Biphenyls

In response to the request for a waste evaluation, the samples that were collected and analyzed using Method 8080, during the 1991 project for the Assessment of Known, Suspect, and Potential Environmental Releases of Polychlorinated Biphenyls, were used for waste characterization PCB waste was shipped under an existing waste profile agreement with Chemical Waste Management Since Method 4020 was not needed for waste characterization, the comparison of analytical data for waste samples using Method 4020 and Method 8080 was not conducted

In response to the request for an evaluation of concrete and soil verification samples, the following comparison study includes confirmation soil samples that were collected at all of the PCB sites and were analyzed using both Method 8080 and Draft Method 4020 For concrete transformer pads, all samples were sent to an offsite laboratory for destructive analysis using Method 8080 For the soil samples, a standard of ten parts per million (ppm) was used as a field target for the Immunoassay Field Technique in accordance with the Final Proposed Action Memorandum for the Remediation of PCBs For samples exceeding the 10 ppm standard, the samples were reanalyzed using the a 25 ppm standard for either confirmation or additional comparison data, prior to shipping samples for offsite analysis The eighty-six confirmation soil samples for the PCB Removal Project that were analyzed using both Draft Method 4020 and Method 8080 are summarized as follows

Sample Number	Location (Bldg)	Method 4020 Result (Using 10 or 25 ppm standards)	Method 8080 Result
SS00002RM	33 (371)	<10 ppm	Undetected
SS00004RM	33 (371)	<10 ppm	Undetected
SS00011RM	20 (515/516)	<10 ppm	0 934 ppm
SS00016RM	20 (515/516)	<10 ppm	0 141 ppm
SS00026RM	10/11 (555/558)	<10 ppm	0 056 ppm
SS00028RM	10/11 (555/558)	<10 ppm	Undetected
SS00033RM	10/11 (555/558)	<10 ppm	1 3 ppm
SS00070RM	17 (883)	<10 ppm	2 70 ppm
SS00079RM	17 (883)	<10 ppm	0 30 ppm
SS00090RM	17 (883)	<10 ppm	3 10 ppm
SS00094RM	17 (883)	<10 ppm	1 30 ppm
SS00095RM	17 (883)	<10 ppm	1 80 ppm
SS00097RM	17 (883)	<10 ppm	0 47 ppm
SS00132RM	23 (559)	<10 ppm	2 98 ppm
SS00145RM	23 (559)	<10 ppm	0 065 ppm
SS00150RM	23 (559)	<10 ppm	0 42 ppm
SS00197RM	23 (559)	<10 ppm	0 46 ppm
SS00203RM	23 (559)	<10 ppm	0 096 ppm
SS00265RM	23 (559)	<10 ppm	0 11 ppm
SS00108RM	26 (750)	<10 ppm	0 16 ppm
SS00160RM	26 (750)	<10 ppm	0 65 ppm
SS00162RM	26 (750)	<10 ppm	5 9 ppm
SS00165RM	26 (750)	<10 ppm	0 09 ppm
SS00168RM	26 (750)	<10 ppm	2 8 ppm
SS00170RM	26 (750)	<10 ppm	2 3 ppm
SS00171RM	26 (750)	<10 ppm	Undetected
SS00177RM	25 (707)	<10 ppm	1 1 ppm
SS00185RM	25 (707)	<10 ppm	1 39 ppm
SS00206RM	25 (707)	<10 ppm	12 ppm

SS00212RM	25 (707)	<10 ppm	2 05 ppm
SS00213RM	25 (707)	<10 ppm	2 06 ppm
SS00217RM	25 (707)	<10 ppm	0 53 ppm
SS00256RM	24 (708)	<10 ppm	0 04 ppm
SS00258RM	24 (708)	<10 ppm	Undetected
SS00301RM	24 (708)	<10 ppm	3 2 ppm
SS00305RM	24 (708)	<10 ppm	2 1 ppm
SS00310RM	24 (708)	<10 ppm	0 32 ppm
SS00316RM	24 (708)	<10 ppm	Undetected
SS00319RM	24 (708)	<10 ppm	0 58 ppm
SS00352RM	21 (776)	<10 ppm	3 1 ppm
SS00359RM	21 (776)	<10 ppm	0 23 ppm
SS00364RM	21 (776)	<10 ppm	0 80 ppm
SS00367RM	21 (776)	<10 ppm	0 24 ppm
SS00495RM	21 (776)	<10 ppm	4 1 ppm
SS00497RM	21 (776)	<10 ppm	3 19 ppm
SS00498RM	21 (776)	<10 ppm	0 94 ppm
SS00500RM	21 (776)	<10 ppm	0 80 ppm
SS00526RM	21 (776)	<25 ppm	11 0 ppm
SS00531RM	21 (776)	<10 ppm	5 7 ppm
SS00533RM	21 (776)	>25 ppm	70 0 ppm
SS00534RM	21 (776)	>25 ppm	46 0 ppm
SS00535RM	21 (776)	>25 ppm	46 0 ppm
SS00537RM	21 (776)	>25 ppm	49 0 ppm
SS00538RM	21 (776)	>25 ppm	56 0 ppm
SS00539RM	21 (776)	>25 ppm	15 0 ppm
SS00430RM	12/13 (661/675)	<10 ppm	0 12 ppm
SS00434RM	12/13 (661/675)	<10 ppm	0 46 ppm
SS00437RM	12/13 (661/675)	<10 ppm	0 44 ppm
SS00438RM	12/13 (661/675)	<10 ppm	0 18 ppm
SS00441RM	12/13 (661/675)	<10 ppm	Undetected
SS00447RM	12/13 (661/675)	<10 ppm	0 27 ppm
SS00450RM	12/13 (661/675)	<10 ppm	Undetected
SS00455RM	12/13 (661/675)	<10 ppm	0 67 ppm
SS00460RM	12/13 (661/675)	<10 ppm	0 11 ppm

SS00463RM	12/13 (661/675)	<10 ppm	0 42 ppm
SS00464RM	12/13 (661/675)	<10 ppm	0 27 ppm
SS00473RM	12/13 (661/675)	<10 ppm	0 28 ppm
SS00477RM	12/13 (661/675)	<10 ppm	0 13 ppm
SS00481RM	12/13 (661/675)	<10 ppm	0 34 ppm
SS00545RM	37 (662)	<10 ppm	Undetected
SS00546RM	37 (662)	<10 ppm	0 38 ppm
SS00548RM	37 (662)	<10 ppm	Undetected
SS00553RM	37 (662)	<10 ppm	0 11 ppm
SS00556RM	37 (662)	<10 ppm	Undetected
SS00563RM	37 (662)	<10 ppm	Undetected
SS00569RM	37 (662)	<25 ppm	4 3 ppm
SS00572RM	37 (662)	<10 ppm	0 201 ppm
SS00578RM	37 (662)	<10 ppm	0 77 ppm
SS00583RM	37 (662)	<10 ppm	0 24 ppm
SS00585RM	37 (662)	<10 ppm	0 10 ppm
SS00591RM	37 (662)	<10 ppm	Undetected
SS00600RM	37 (662)	<10 ppm	Undetected
SS00603RM	37 (662)	<10 ppm	Undetected
SS00609RM	37 (662)	<25 ppm	Undetected
SS00612RM	37 (662)	<10 ppm	0 59 ppm
SS00616RM	37 (662)	<25 ppm	3 06 ppm

Comparison data for Site 21, which was not completed due to equipment limitations and health and safety issues, has been included to show the correlation between Method 4020 and Method 8080 for PCB concentrations exceeding 25 ppm Although the data reflects one false negative out of 86 confirmation samples, Method 8080 analytical data indicated that the sample was below the cleanup level Based on the comparision study of the results, the use of Draft Method 4020 is appropriate for the cleanup criteria that was established for the PCB Removal Project The use of the immunoassay Field Technique proved to be cost effective, more timely than relying on laboratory analysis, and the use of the 10 ppm standard provided conservative analytical data for directing the field work

If you have any questions, please contact me at 966-4839 or Norma Castaneda of my staff at 966-4226

Steve Slaten
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Rocky Flats Field Office